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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,223	06/23/2003	Kenji Yamagami	16869B-074700US	1094

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EXAMINER

NGUYEN, THANH T

ART UNIT PAPER NUMBER

2144

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,223

Applicant(s)

YAMAGAMI, KENJI

Examiner

Tammy T. Nguyen

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/27/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



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Detailed Office Action

1. This action is in response to the application 10/077,394 filed February 14, 02
2. Claims 2, 5, 6, 8-22 are cancelled.
3. Claims 23-26 are newly added.
4. Claims 1, 3, 4, 7, 12, and 23-26 are presented for examination.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

6. Applicants are required to fill out blank on page 7 of the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1, 3, 4, 7, 12, and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Bergsten. (USPN 6,282,610 – Date of Patent: August 28, 2001, herein referred to as “Bergsten”).

9. As to claim 1, Bergsten teaches the invention as claimed, including a remote copy system, comprising: a first storage system including a first storage controller and a first data volume, the first storage controller being configured to control data access requests to the first data volume, the first storage system being configured to store write data in the first data volume upon receiving a write request from a first host associated with the first storage system and generate a journal including control data and journal data (Fig. 1, host 2-1, storage 3-1, MSD 4-1) (see col.4, lines 11-20, and col.6, lines 55-63, and col.18, line59 to col.19, line 12); a second storage system including a second data volume, the second storage system being configured to receive and store data corresponding to the write data to the first data volume in the second data volume (Fig.1, host 2-2, storage 3-2, MSD 4-2) (see col.4, lines 11-20, and col.6, lines 55-63, col.18, line59 to col.19, line 12); and a third storage system including a third data volume, the third storage system being configured to receive and store data corresponding to the write to the first data volume in the third data volume (fig.1 host 2-M, storage controller 3-M, MSD 4-M) (see col.6, lines 42-63, col.18, line59 to col.19, line 12); wherein the write request from the first host to the first storage system completes after the write data are copied to the second storage system (see col.5, lines 42-67, and col.18, lines 23-39); wherein the journal data of the journal are received to the third data volume

independently from completion of the write request according to information provided in the control data (see col.18, lines 22-39).

10. As to claim 3, Bergsten teaches the invention as claimed, wherein the second storage system is located relatively close to the first storage system and the second storage system is located relatively far from the first storage system (see col.8, lines 6-30).

11. As to claim 4, Bergsten teaches the invention as claimed, wherein the second storage system is located within 100 miles of the first storage system and the third storage system is located more than 100 miles from the first storage system (fig.1).

12. As to claim 7, Bergsten teaches the invention as claimed, further comprising: a second host coupled to the storage system, wherein the second storage system is configured to function as a primary storage system if the first storage system experiences failure (see col.8, lines 31-42).

13. As to claim 12, Bergsten teaches the invention as claimed, further comprising a third host coupled to the third storage system, wherein the third storage system is configured to replace the first storage system as a primary storage system if the first storage system experiences failure (see col.18, lines 23-39).

14. As to claim 23, Bergsten teaches the invention as claimed, wherein the control data includes sequence information to determine write ordering (Fig.1).

15. As to claim 24, Bergsten teaches the invention as claimed, wherein the control data includes a time when the write data are stored in the first data volume based on the write request from the first host (see col.8, lines 48-67).

16. As to claim 25, Bergsten teaches the invention as claimed, wherein the journal

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data of the journal are received to the third data volume after the write data are copied to the second storage system to secure the write data when the first storage system experience failure (see col.8, lines 31-42).

17. As to claim 26, Bergsten teaches the invention as claimed, including a remote copy system, comprising: a first storage system including a first storage controller and a first data volume, the first controller being configured to control data access request to the first volume, the first storage system being configured to store write data in the first data volume upon receiving a write request from a first host associated with the first storage system and generate a journal including control data and journal data (Fig. 1, host 2-1, storage 3-1, MSD 4-1) (see col.4, lines 11-20, and col.6, lines 55-63, and col.18, line59 to col.19, line 12); a second storage system including a second data volume, the second storage system being configured to synchronously receive and store data corresponding to the write data to the first data volume in the second data volume (Fig. 1, host 2-2, storage 3-2, MSD 4-2) (see col.4, lines 11-20, and col.6, lines 55-63, col.18, line59 to col.19, line 12); and a third storage system including a third data volume, the third storage system being configured to asynchronously receive and store data corresponding to the journal data of the journal in the third data volume according to information provided in the control data (fig. 1 host 2-M, storage controller 3-M, MSD 4-M) (see col.6, lines 42-63, col.18, line59 to col.19, line 12).

Conclusion

18. Any inquiries concerning this communication or earlier communications from

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the examiner should be directed to **Tammy T. Nguyen** who may be reached via telephone at **(571) 272-3929**. The examiner can normally be reached Monday through Friday between 8:00 a.m. and 5:00 p.m. eastern standard time.

If you need to send the Examiner, a facsimile transmission regarding this instant application, please send it to **(703) 872-9306**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, David Wiley, may be reached at **(571) 272-3923**.

TTN

September 16, 2005


DAVID WILEY
SUPERVISORY PATENT EXAMINER
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